

## RIVERS AND FLOODS, OCTOBER, 1913.

By ALFRED J. HENRY, Professor of Meteorology.

The Rio Grande was above flood stage at Rio Grande City, Tex., from October 3 to 7, with a crest stage of 28 feet, 8 feet above flood stage, on the 4th; and at Mission, Tex., from October 5 to 7, with a crest stage of 24 feet, 2.6 feet above flood stage, on the 6th.

A rapid rise occurred in the Guadalupe River on the 2d and 3d, with a crest stage at Gonzales, Tex., of 36.7 feet, 14.7 feet above flood stage, on the 3d; and at Victoria of 24.7 feet, 8.7 feet above flood stage, on the 6th.

The Colorado River at Columbus, Tex., rose from 7.2 feet on the 1st to 32.2 feet, 8.2 feet above flood stage, on the 4th. Sharp rises occurred in other rivers of Texas, but flood stages were not reached, except in the San Antonio and Sabine Rivers.

During the first week of the month the West Pearl River, in Louisiana, rose almost to the flood stage.

In South Carolina the Waccamaw River rose steadily nearly all the month, the flood stage being reached on the 26th and 27th, and the Santee River, at Rimini, crested at 12.3 feet, 0.3 foot above flood stage, on the 28th.

The Tar River, at Greenville, N. C., reached a stage of 14.3 feet, 1.3 feet above flood stage, on the 30th, and the

Neuse River at Smithfield rose to 13.7 feet, 0.7 foot above flood stage, on the 26th.

In central California the rivers were low, and the lowest stages of record were recorded in the Feather River.

Hydrographs for typical points on several principal rivers are shown on Chart I. The stations selected for charting are Keokuk, St. Louis, Memphis, Vicksburg, and New Orleans, on the Mississippi; Cincinnati and Cairo, on the Ohio; Nashville, on the Cumberland; Johnsonville, on the Tennessee; Kansas City, on the Missouri; Little Rock, on the Arkansas; and Shreveport, on the Red.

*Losses due to October, 1913, floods.*

State.	River system.	Item 1, general loss bridges, etc.	Item 2.		Item 3, suspension of business.
			Crops.	Live stock.	
Texas.....	Rio Grande.....	1 \$417,485	\$300		
	Colorado.....		5,150		
	Guadalupe.....		695,000		
	San Antonio.....				
North Carolina.....	Tar.....			\$100	\$300
	Neuse.....				

<sup>1</sup> Loss for floods on the four rivers.

<sup>2</sup> Loss for floods on the two rivers.